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10/796,139	03/10/2004	Jin Seok Im	0465-1162PUS1	2072
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EXAMINER				
KHAN, ASHER R				
ART UNIT		PAPER NUMBER		
4134				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/796,139

Applicant(s)

IM, JIN SEOK

Examiner

ASHER KHAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5-10-14-18 is/are rejected.
- 7) ☒ Claim(s) 2-4-11-13-19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date 6/29/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The specification of the disclosure is objected to because it contains a misspelling "tick" instead of "trick" on page 1 paragraph 0014. Also the word "9" instead of "(" and a word "proram" instead of "program" on page 11 paragraph 0029.

Appropriate corrections are required.

Claim Objections

2. Claim 17 is objected to because of the following informality: Claim 17 has the word 9 instead of "(" and word "program" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5-8 and 14-18 are rejected under 35 U.S.C. 102(a/e) as being anticipated by U.S. Patent 6,658,199 B1 to Hallberg.

As to claim 1, Hallberg discloses a system recording and playing back a transport stream transmitted by a digital broadcast, a digital video 5 record/playback apparatus comprising: an output control unit outputting a predetermined playback mode (Col. 3, lines 39-63);

a transmission control unit controlling a transmission bit rate and transmission time point of the transport stream based on the predetermined playback mode and VBV (video buffering verifier) buffer status information (Fig. 1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization and STC count control on a PCR (program clock reference) packet of the transport stream inputted via the transmission control unit, the demux extracting ES (elementary stream) data for a program data packet of the transport stream (Fig. 1b)(Col. 4, lines 53-68; Col. 4, lines 53 - 68; Col. 5, lines 1-28);

a VBV buffer temporarily storing the extracted ES data, the VBV buffer playing a role in buffering between the transmission bit rate and a decoding frame rate, the VBV buffer outputting a 20 buffer status to the transmission control unit (Fig. 1b)(Col. 6, lines 30-43; Col. 10, 57-67; Col. 11, lines 1-21); and

a decoder adjusting DTS (decoding timestamp) according to the predetermined playback mode of the output control unit, the decoder controlling a decoding time point by comparing the adjusted DTS to an STC count value and decoding the ES data outputted from the VBV buffer (Fig 1b) (Fig. 4)(Fig. 6) (Col. 10, lines 42-67)(Col. 11, 1-60).

As to claim 5, Hallberg further discloses wherein the transmission control unit outputs a PCR value of a next picture following a picture to be played back as a PCR value to be transmitted for the STC count initialization in case of an N-times speed reverse trick play mode (Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 6, Hallberg further discloses wherein if a playback mode and a first picture to be played back are determined, the demux initializes an STC count value becoming a reference of the decoding time point with a PCR value of the determined picture and an STC count is then synchronized with an STC (system count clock) according to a playback direction to be sequentially decremented (Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claims 7 and 16, Hallberg further discloses wherein the decoder determines the decoding time point by comparing the sequentially decremented STC count value to a readjusted DTS value (Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 11, lines 22-60) (Col. 7, lines 39-67;Col. 8, lines 1-3)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 8, Hallberg discloses digital video record/playback apparatus comprising: a record control unit only selecting transport packets corresponding to a program to be stored in a transport stream, the record control unit extracting picture information and PCR (program clock reference) of the program to be Used in playback (Fig. 1b)(Col 5, lines 1-30);
a storage medium storing the transport packets of the program selected in the record control unit, the picture information, and the PCR of the selected program;

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an output control unit outputting a predetermined playback mode (Fig. 1b)(Col 5, lines 1-30);

a transmission control unit controlling a transmission bit rate and transmission time point of the transport stream based on the predetermined playback mode and VBV (video buffering verifier) buffer status information (Fig. 1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization and STC count control on a PCR (program clock reference) packet of the transport stream inputted via the transmission control unit, the demux extracting ES (elementary stream) data for a program data packet of the transport stream (Fig. 1b)(Col. 4, lines 53-68; Col. 4, lines 53 - 68; Col. 5, lines 1-29);

a VBV buffer temporarily storing the extracted ES data, the VBV buffer playing a role in buffering between the transmission bit rate and a decoding frame rate, the VBV buffer outputting a buffer status to the transmission control unit (Fig. 1b)(Col. 6, lines 30-43; Col. 10, 57-67; Col. 11, lines 1-21);and

a decoder adjusting DTS (decoding timestamp) according to the predetermined playback mode of the output control unit, the decoder controlling a decoding time point by comparing the adjusted DTS to an STC count value and decoding the ES data outputted from the VBV buffer (Fig 1b)(Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60).

As to claim 14, Hallberg further discloses wherein the transmission control unit outputs a PCR value of a next picture following a picture to be played back as a PCR

value to be transmitted for the STC count initialization in case of an N-times speed reverse trick play mode (Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60) (Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 15, Hallberg further discloses wherein if a playback mode and a first picture to be played back are determined, the demux initializes an STC count value becoming a reference of the decoding time point with a PCR value of the determined picture and an STC count is then synchronized with an STC (system count clock) according to a playback direction to be sequentially decremented(Fig. 4)(Fig. 6)(Col. 5, lines 1-29)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claim 17, A playback method in a digital video record/playback apparatus, comprising:
a step (a) of storing transport packets of a selected program, picture information, and PCR (program clock reference) of the selected program (fig. 1b)(Fig. 4)(Fig. 6) (Col. 5, lines 1-29);
a step (b) of performing STC (system time clock) count initialization using a value of the stored PCR and decrementing an STC count according to a direction of a trick play mode (Fig. 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-67;Col. 8 lines 1-3);
a step (c) of adjusting DTS (decoding timestamp) of a picture to be decoded according to the direction and multiple- times speed of the trick play mode(Fig. 4)(Fig. 6)(Col. 7, lines 39-58)(Col. 11, lines 21-60); and
a step (d) of decoding to output picture data of the selected program by controlling a decoding time point by comparing a value of the adjusted DTS to a value of the

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decremented STC count and by referring to the picture information according to the trick play mode(Fig. 1b) (Fig. 4)(Fig. 6)(Col. 11, lines 21-60)(Col. 4, lines 53- 68; Col. 5, lines 1-28);

As to claim 18, wherein in the step (b), the STC count is sequentially decremented in case of a reverse trick play (Fig 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-67;Col. 8 lines 1-3);

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,658,199 B1 to Hallberg in view of U.S. Patent 6,453,116 B1 to Ando et al. "Ando".

As to claim 9, Hallberg fails to disclose wherein the record control unit stores information of a location where a picture is stored, information of a location where a PCR value of the picture is stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium

Ando teaches wherein the record control unit stores information of a location where a picture is stored, information of a location where a PCR value of the picture is

stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium (Fig. 1)(Col. 33, lines 40-57)(Col. 6, lines 63-66)(Col. 36, lines 63-67; Col. 37, lines 1-6).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg with the teaching of Ando. Rationale would have been that all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 10, Hallberg fails to disclose wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible.

Ando teaches wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible (Col. 1, lines 53-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg with the teaching of Ando. Motivation would have been in order to provide a recording medium that allows a random access to contents recorded on a recording medium.

Therefore, it would have been obvious to combine Hallberg with Ando to make the modification as claimed in claims 9 and 10.

Allowable Subject Matter

Claims 2-4, 11-13 and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on Monday-Friday 9:30 am - 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lun Yi can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/A. K./

Examiner, Art Unit 4134

/LUN-YI LAO/

Supervisory Patent Examiner, Art Unit 4134